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1631

TECH CENTER 1600 2900

RAW SEQUENCE LISTING

PATENT APPLICATION: US/08/939,905B

DATE: 07/11/2001
TIME: 10:00:10Input Set : A:\873726u1.sql
Output Set: N:\CRF3\07112001\H939905B.raw5 110 APPLICANT: Bizen, Mark
9 120 TITLE OF INVENTION: Soybean Seed Coat Peroxidase Structural Gene And Regulatory

Region

13 130 FILE REFERENCE: 76-105
17 140 CURRENT APPLICATION NUMBER: US 08/939,905B
C--> 19 <141> CURRENT FILING DATE: 1997-09-29
23 150 PRIOR APPLICATION NUMBER: US 08/723,414
25 151 PRIOR FILING DATE: 1996-09-30
29 160 NUMBER OF SEQ ID NOS: 19
33 170 SOFTWARE: PatentIn version 3.0
37 110 SEQ ID NO: 1
39 211 LENGTH: 1244
41 212 TYPE: DNA
43 213 ORGANISM: Glycine max
47 220 FEATURE:
49 221 NAME/KEY: CDS
51 222 LOCATION: (1)..(1056)
55 230 FEATURE:
57 231 NAME/KEY: sig_peptide
59 232 LOCATION: (1)..(78)
63 400 SEQUENCE: 1
64 atg ggt tcc atg cgt cta tta gta gta gca ttg ttg tgt gca ttt gct 48
65 Met Gly Ser Met Arg Leu Leu Val Val Ala Leu Leu Cys Ala Phe Ala
66 1 5 10 15
67 atg cat gca ggt ttt tca gtc tct tat gct cag ctt act cct acg ttc 96
68 Met His Ala Gly Phe Ser Val Ser Tyr Ala Gln Leu Thr Pro Thr Phe
69 20 25 30
70 tac aga gaa aca tct cca aat ctg ttc cct att gtg ttt gga gta atc 144
71 Tyr Arg Glu Thr Cys Pro Asn Leu Phe Pro Ile Val Phe Gly Val Ile
72 35 40 45
73 ttc gat gct tct ttc acc gat ccc cga atc ggg gcc agt ctc atg agg 192
74 Phe Asp Ala Ser Phe Thr Asp Pro Arg Ile Gly Ala Ser Leu Met Arg
75 50 55 60
76 ctt cat ttt cat gat tgc ttt gtt caa ggt tgt gat gga tca gtt ttg 240
77 Leu His Phe His Asp Cys Phe Val Gln Gly Cys Asp Gly Ser Val Leu
78 65 70 75 80
79 ctg aac aac act gat aca ata gaa agc gag caa gat gca ctt cca aat 288
80 Leu Asn Asn Thr Asp Thr Ile Glu Ser Glu Gln Asp Ala Leu Pro Asn
81 85 90 95
82 atc aac tca ata aga gga ttg gac gtt gtc aat gac atc aag aca ggc 336
83 Ile Asn Ser Ile Arg Gly Leu Asp Val Val Asn Asp Ile Lys Thr Ala
84 100 105 110
85 gtg gaa aat agt tgt cca gac aca gtt tct tgt gct gat att ctt gct 384
86 Val Glu Asn Ser Cys Pro Asp Thr Val Ser Cys Ala Asp Ile Leu Ala
87 115 120 125
88 att gca gct gaa ata gct tct gtt ctg gga gga ggt cca gga tgg cca 432
89 Ile Ala Ala Glu Ile Ala Ser Val Leu Gly Gly Gly Pro Gly Trp Pro
90 130 135 140

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Input Set : A:\873726u1.sql
 Output Set: N:\CRF3\07112001\H939905B.raw

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100 gtt cca tta gga aga agg gac agc tta aca gca aac cga acc ctt gca 480
101 Val Pro Leu Gly Arg Arg Asp Ser Leu Thr Ala Asn Arg Thr Leu Ala
102 145 150 155 160
104 aat caa aac ctt cca gga cct ttc ttc aac ctc act caa ctt aaa gct 520
105 Asn Gln Asn Leu Pro Ala Pro Phe Phe Asn Leu Thr Gln Leu Lys Ala
106 165 170 175
108 tcc ttt gct gtt cca ggt ctc aac acc ctt gat tta gtt aca ctc tca 576
109 Ser Phe Ala Val Gln Gly Leu Asn Thr Leu Asp Leu Val Thr Leu Ser
110 180 185 190
112 ggt ggt cat acg ttt gga aga gct cgg tgc agt aca ttc ata aac cga 624
113 Gly Gly His Thr Phe Gly Arg Ala Arg Cys Ser Thr Phe Ile Asn Arg
114 195 200 205
116 tta tac aac ttc agc aac act gga aac cct gat cca act ctg aac aca 672
117 Leu Tyr Asn Phe Ser Asn Thr Gly Asn Pro Asp Pro Thr Leu Asn Thr
118 210 215 220
120 aca tac tta gaa gta ttg cgt gga aga tgc ccc cag aat gca act ggt 720
121 Thr Tyr Leu Gln Val Leu Arg Ala Arg Cys Pro Gln Asn Ala Thr Gly
122 225 230 235
124 gat aac ctc acc aat ttg gac ctg agc aca cct gat caa ttt gac aac 768
125 Asp Asn Leu Thr Asn Leu Asp Leu Ser Thr Pro Asp Gln Phe Asp Asn
126 240 250 255
128 aga tac tac tac aat ctt ctg cag ctc aat ggc tta ctt cag agt gac 816
129 Arg Tyr Tyr Ser Asn Leu Leu Gln Leu Asn Gly Leu Leu Gln Ser Asp
130 260 265 270
132 caa gaa ctt ttc ttc act cct ggt gct gat acc att ccc att gtc aat 864
133 Gln Glu Leu Phe Ser Thr Pro Gly Ala Asp Thr Ile Pro Ile Val Asn
134 275 280 285
136 agc ttc agc agt aac cag aat act ttc ttt tcc aac ttt aga gtt tra 912
137 Ser Phe Ser Ser Asn Gln Asn Thr Phe Phe Ser Asn Phe Arg Val Ser
138 290 295 300
140 atg ata aaa atg gtt aat att gga gtg ctg act ggg gat gaa gga gaa 960
141 Met Ile Lys Met Gly Asn Ile Gly Val Leu Thr Gly Asp Glu Gly Glu
142 305 310 315
144 att cgc ttg caa tgc aat ttr gtg aat gga gac tog ttt gga tta gct 1008
145 Ile Arg Leu Gln Cys Asn Phe Val Asn Gly Asp Ser Phe Gly Leu Ala
146 320 330 335
148 agt gtg ggg tcc aaa gat gct aaa caa aag ctt gtt gct caa tct aaa 1056
149 Ser Val Ala Ser Lys Asp Ala Lys Gln Lys Leu Val Ala Gln Ser Lys
150 340 345 350
152 taaaccaata attaa*gggg atgtgcatgc tagctagcct gtaaaggcaa attaggttgt 1116
154 aaacctcttt gctagctata ttgaaataaa ccaaaggagt agtgtgcatg tcaattogat 1176
156 ttgtccatgt acctcttgga atattatgta ataattattt gaattcttt aaggtaactta 1236
158 attaatca 1244
161 *1180 SEQ ID NO: 2
163 *1110 LENGTH: 4700
165 *1112 TYPE: DNA
167 *1113 ORGANISM: Flycine max
171 *1220 FEATURE:
173 *1221 NAME/KEY: promoter

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Input Set : A:\873726u1.sql
Output Set: N:\CRF3\07112001\H939905B.raw

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175 - 332 - LOCATION: (1)..(1532)
176 - 330 - FEATURE:
181 - 331 - NAME/KEY: signal_peptide
182 - 332 - LOCATION: (1533)..(1610)
183 - 330 - FEATURE:
184 - 331 - NAME/KEY: exon
185 - 332 - LOCATION: (1611)..(1751)
186 - 330 - FEATURE:
187 - 331 - NAME/KEY: exon
188 - 332 - LOCATION: (1752)..(2574)
203 - 330 - FEATURE:
205 - 331 - NAME/KEY: exon
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211 - 330 - FEATURE:
212 - 331 - NAME/KEY: exon
216 - 332 - LOCATION: (2770)..(3604)
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221 - 331 - NAME/KEY: Intron
223 - 332 - LOCATION: (3605)..(4012)
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252 - 331 - NAME/KEY: CDS
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261 - 331 - NAME/KEY: CDS
263 - 332 - LOCATION: (2575)..(2769)
267 - 330 - FEATURE:
269 - 331 - NAME/KEY: CDS
271 - 332 - LOCATION: (2770)..(4312)
275 - 400 - SEQUENCE: 3
276 tagataaaaaa aatggparat aattttttctc agatgttgtt tatactgttt ttttaatcag
278 aattaaaaatt cttcttttat tatgacata attttttttg gtgaatatta tcgacataat
280 tattttaataa aaatttttat tgtacataga agtgataact caattttaat attggagaac
282 aatagagaaaa attanaaaaa ctgttattag aagaaaaaaa tatatggaaa aggttagcta
284 attatattatg taaaattagt tgttttaatt ggctatataa accctattgt actctttgta
286 atttcacatt ttctcattaa atactttctt actttttaag ttctatattt tctctcaatt
288 ttctctgata taccanaaaa tttaacatgg tatatcagcg ataccaccca ctttgaaagc
290 atagtattggt tagtaatggc agcaaaaatt tgcctgtggt caagcaaaagc aagtgtttat
292 atagatgttta ctttttgtag ggaattcatg ccaatgggtac tgattgtgaa actgagaaaa
294 aaattttgga gaatttgaat tatgatcatt aaatactcct ctcttgacta ctttcgtccc
296 taaattttgt accatattta ttctccaaaa atttgattac aatgcactaa ttaatgaatg

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Input Set : A:\873726u1.sql

Output Set: N:\CRF3\07112001\H939905B.raw

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298 tttttacat tatcatatta tcatatctga ctttttgttt ttacttttta taataattat 720
300 tttaaaaagt catatcatga aataattttt taatagttta cagttaaatt tttacagtaa 731
302 aaatgcotga aaattaaaat ttattttttc aagtcacat ttagtcaaat cccaaaacaa 840
304 tgattatttt ttgcaaatga atgtttatgg aacattttaa tgtagcctaa ttaattctgg 900
306 ttatgggtgtc aatgttccaa aacctaatgc aagctcttag caagtacata catagatcta 90
308 attttaaaat tatcttttag caagagatat aaagattata catctagttt taaacattaa 1000
310 cttttgtttt tgtgttbaaa aacagtaaca tttctttaat tttgtagagt gaactgtctc 1050
312 aaccatatta acgaagattt taatttgiat tcaagttoat gaacttagta aataagtttt 1100
314 ggtcttcagt tttcaatttt cattacaaca tttatgtaaa atatcaacgt tttctgaaat 1200
316 ttgttgcttg tgggtctcaa ccacatttaa gagattatag aaattaattt tcaagaagat 1250
318 aatgattcct actcttgctg gccctacat agtacaataa atccactcat aaatcaacaa 1300
320 gtctgtctca taggcaattg ggcctacat cataaacaat acgtacgtga tattatctag 1350
322 tgtctctcag tttactttat gagaaattat tttcttttaa aaaaagttaa ttaataaaaa 1440
324 cttttgcgat aactgtgagt acaagaatc ccgcgaatc atctctataa ataaagyat 1500
326 ctatatgaga gctaaaaatc tattaactca aa atg ggt tcc atg cgt cta tta 1550
327 Met Gly Ser Met Arg Leu Leu 5
328 1
330 gta gtg gca ttg tgg tgt gca ttt gct atg cat gca ggt ttt tca gtc 1601
331 Val Val Ala Leu Leu Cys Ala Phe Ala Met His Ala Gly Phe Ser Val 20
332 10 15 20
334 tct tat gct cag ctt act cct acg ttc tac aga gaa aca tgt cca aat 1649
335 Ser Tyr Ala Gln Leu Thr Pro Thr Phe Tyr Arg Glu Thr Cys Pro Asn 35
336 25 30 35
338 ctg ttc cct att gtg tat gga gta atc ttc gat gct tct ttc acc gat 1697
339 Leu Phe Pro Ile Val Phe Gly Val Ile Phe Asp Ala Ser Phe Thr Asp 45 50 55
340 40 45 50 55
342 ccc cga atc ggg gcc agt ctc atg agg ctt cat ttt cat gat tcc ttt 1745
343 Pro Arg Ile Gly Ala Ser Leu Met Arg Leu His Phe His Asp Cys Phe 60 65 70
344 60 65 70
346 gtt caa gtaagtaatt tttttttttt ttccaaaatg cctgcacat ttaacagat 1781
347 Val Gln
348 tgcctttgttc acctagaaaa atgtgttttt ttcaacgata ttaagtaagt ttctttggtt 1801
350 tgaataataa atcagaaaga gatcaagaaa atagctagaa agaaagcaac gtttttttaa 1811
352 aaaggtattta gtgtgagaaa aataattaaa ctgaagagaa agaaattaaa taagcttttc 1861
354 ttgaatgata ttacatgtc ttatthaact aaagtcact tttttcttta agttgtgctt 1901
356 gaagaaaaaa gatgtcttct agtttagttt tgattaatgc taattatatt ttaattaat 2001
358 taattaatac tatatatcta ttaccatat taattattac tatatttcac gatgacaaca 2101
360 gacaagratc caaagaggt atcgttagat gattaatttt ttataaaaa aactttttgc 2221
361 gtgtatagat attcttttat aattggtgca gaaacttgta atgctaattg caattaatct 2301
363 tacattgatt aactaatagc tatiatcaat atttaggtta ggtataggag acaaatcaag 2341
365 tgatctgaac aaattaagtt ctatatattg cattgtgaca g ggt tgt gat gga tca 2397
366 Gly Cys Asp Gly Ser 75
369 75
370 445
372 gtt ttg ctg aac aac act gat aca ata gaa agc gag caa gat gca ctt
373 Val Leu Leu Asn Asn Thr Asp Thr Ile Glu Ser Glu Gln Asp Ala Leu 90
374 80 85 90
376 cca aat atc aac tca ata aga gga ttg gac gtt gtc aat gac atc aag 2493
377 Pro Asn Ile Asn Ser Ile Arg Gly Leu Asp Val Val Asn Asp Ile Lys 100 105 110
378 95 100 105 110

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Input Set : A:\873726ul.sql
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380 aca gcg gtg gaa aat agt tgt cca gac aca gtt tct tgt gct gat att 2541
381 Thr Ala Val Glu Asn Ser Cys Pro Asp Thr Val Ser Cys Ala Asp Ile
381 115 120 125
384 ttt gct att gca ggt gaa ata gct tct gtt ctg gtaattasta actctaatt 2534
385 Leu Ala Ile Ala Ala Glu Ile Ala Ser Val Leu
386 130 135
388 gattcccaaac cattaaaaag ttgcattgatt ggattcaaaa ttctatgata ttgggggttct 2684
389 gatataaatt tgtaattaaa ttgcactaaa aaaaattatc atataacttt astaaaaaaa 2714
390 atttatctaa ttttaatttat tattaaaaact atttttaaaa ttcaatctta actttttttt 2774
391 atcggagaca tgtaagctgg caccacacgt atatcgttgg aagatgctat aaaaaccattt 1834
392 attaatgga tggatcactt caaaacattt aattcaaat actcttaatt gtgattagta 1894
393 atcatgttcg ggaagttac gtgtgtata attaatitga cttaatcaga taaaaaaca 1944
394 atggagaca agcgggttgg tatagatc actggcctgt agaatat gtg gtttttcacg 3014
395 ttttaataaa agttagctac tatattatat ttagtctttt tttttcttaa acccatttaa 3074
396 cgtgatttat tgaattgaa acatgittcc acacacaggg ttgaaactc ctgcgaacta 3134
397 acatctccaa aatttgaca tttatctatg aagataattc atctatgatg ttaactcta 3184
398 ttatatatat gtatcctgc agtatgaaga attataatag tcaaatatag agtatatcg 3194
399 ggtaaatgta gttgcattgg cgaactgttt cgtctaaaaa gottattcta tatagctttt 3314
400 tttattggaa aataacgatg aactaaaaac gaaagggtat catatagttt gaottttatg 3374
401 tttagagagag acatctaat ttggtcatat gttaaataat taattacaat gcatacacia 3424
402 atattttatgc catatctaaa aaatgataaa atatcatagg tatactaac tatatgatat 3494
403 ccccataaca gaattgtac tttcttcag gcaatgaact taacattct gtttgctaaa 3554
404 aacaaacatc caattaaagt ggttcaaat atttatgtaa taatttacag gga gga 3610
405 31y Gly
406 ggt cca gga tgg cca gtt cca tta gga aga agg gac agt tta aca gca 3698
407 Gly Pro Gly Trp Pro Val Pro Leu Gly Arg Arg Asp Ser Leu Thr Ala
408 140 145 150 155
409 aac cga acc ctt gca aat caa aac ctt cca gca cct ttc ttc aac ctg 3756
410 Asn Arg Thr Leu Ala Asn Gln Asn Leu Pro Ala Pro Phe Phe Asn Leu
411 160 165 170
412 act caa ctt aaa ggt tca ttt gct gtt caa ggt ctg aac acc ctt gat 3794
413 Thr Gln Leu Lys Ala Ser Phe Ala Val Gln Gly Leu Asn Thr Leu Asp
414 175 180 185
415 tta gtt aca ctg tca ggtatacata atcaattttt tatttgcctat tagctagcaa 3809
416 Leu Val Thr Leu Ser
417 190
418 taaaaagttc ctgatacaga catattttaga taaattaatt totccataaa catttataat 3869
419 aaaattatca atttatgtac ttaaaaaatta tggattgaag ctcttttcac caaactttta 3929
420 cttaagttaa ggtgcatata atataaaata aactatctct tgttttttat aaaaagattg 3989
421 aagataagtt aagttctact tataaatcat taatalatgt ata ggt ggt cat acg 4044
422 31y Gly His Thr
423 195
424 ttt gga aga cct cgg tgc agt aca ttc ata aac cga tta tac aac ttc 4092
425 Phe Gly Arg Ala Arg Cys Ser Thr Phe Ile Asn Arg Leu Tyr Asn Phe
426 200 205 210
427 agc aac act gga aac cct gat cca act ctg aac aca aca tac tta gaa 4140
428 Ser Asn Thr Gly Asn Pro Asp Pro Thr Leu Asn Thr Thr Tyr Leu Glu
429 215 220 225
430 gta ttg cgt gca aga tgc ccc cag aat gca act ggg gat aac ctg acc 4158

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VERIFICATION SUMMARY

PATENT APPLICATION: US/08/939,905B

DATE: 07/11/2001

TIME: 10:00:11

Input Set : A:\873726u1.sql

Output Set: N:\CRF3\07112001\H939905B.raw

L:19 M:271 C: Current Filing Date differs, Replaced Current Filing Date